Corporate Information Management:
A Method for Organizing Information Resources
San Diego, CA. - December 3,1992

Office of the Director of Defense Information

Corporate Information Management:
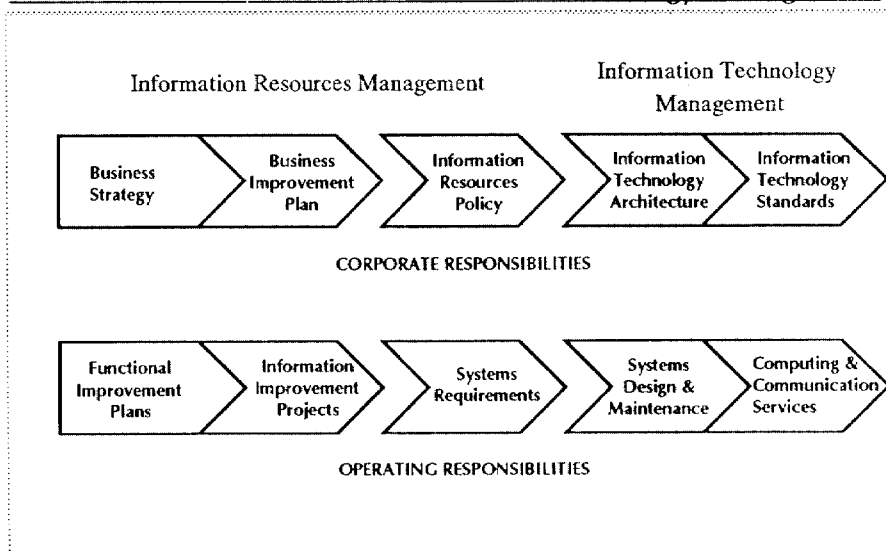
A Method for Organizing Information Resources

Corporate Information Management Conference

San Diego, California, December 3, 1992   Paul A. Strassmann

ASD(C4I), Director of Defense Information | 11/15/92 - T#T 642-1|

Slide 1

The Tasks of Information Resources and Technology Management

Information Resources Management   Information Technology
                                                  Management

Business Strategy → Business Improvement Plan → Information Resources Policy → Information Technology Architecture → Information Technology Standards

CORPORATE RESPONSIBILITIES

Functional Improvement Plans → Information Improvement Projects → Systems Requirements → Systems Design & Maintenance → Computing & Communication Services

OPERATING RESPONSIBILITIES

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Slide 2

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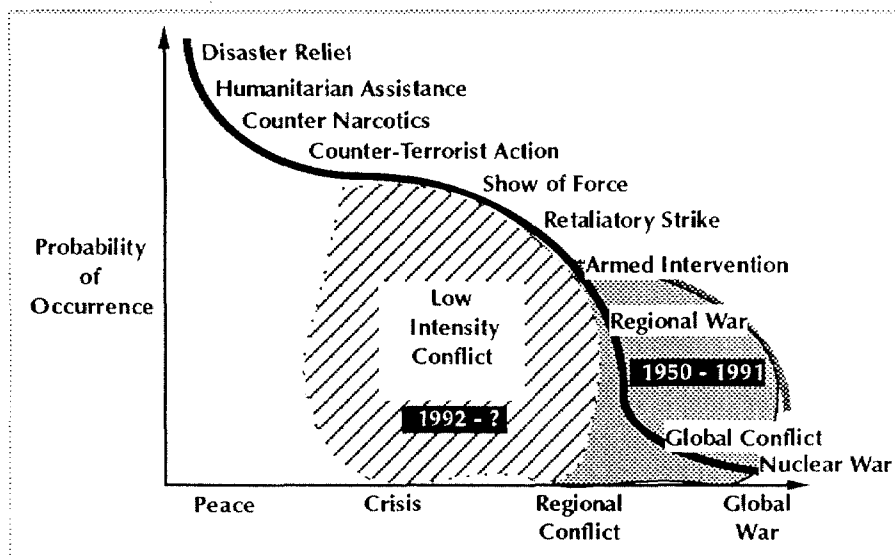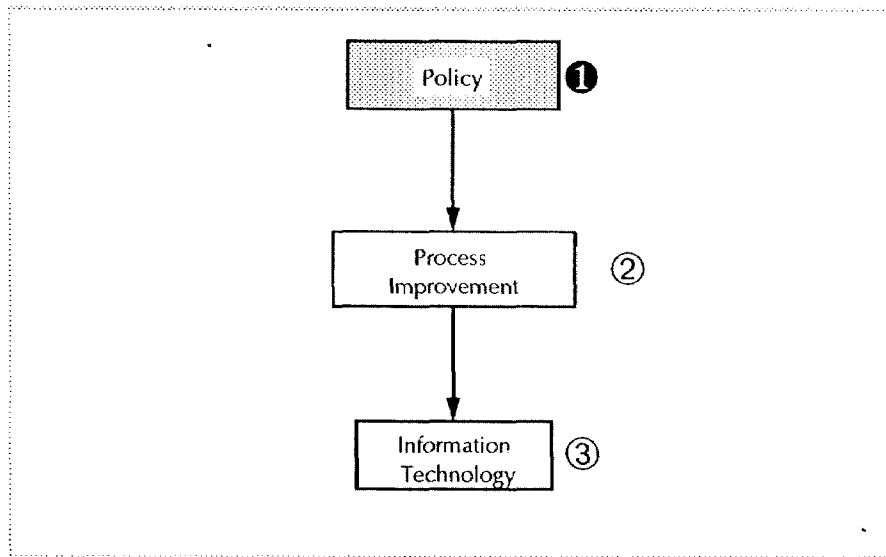San Diego, CA. - December 3,1992

• *Corporate Strategy*

Corporate Strategy

ASD(C3I), Director of Defense Information 11/15/92 - File T #2-3

Projected Defense Operations (1992 and beyond)

Disaster Relief
Humanitarian Assistance
Counter Narcotics
Counter-Terrorist Action
Show of Force
Retaliatory Strike
Armed Intervention

**Probability
of
Occurrence**

**Low
Intensity
Conflict**

Regional War

1950 - 1991

1992 - ?

Global Conflict
Nuclear War

Peace   **Crisis**   **Regional
Conflict**   **Global
War**

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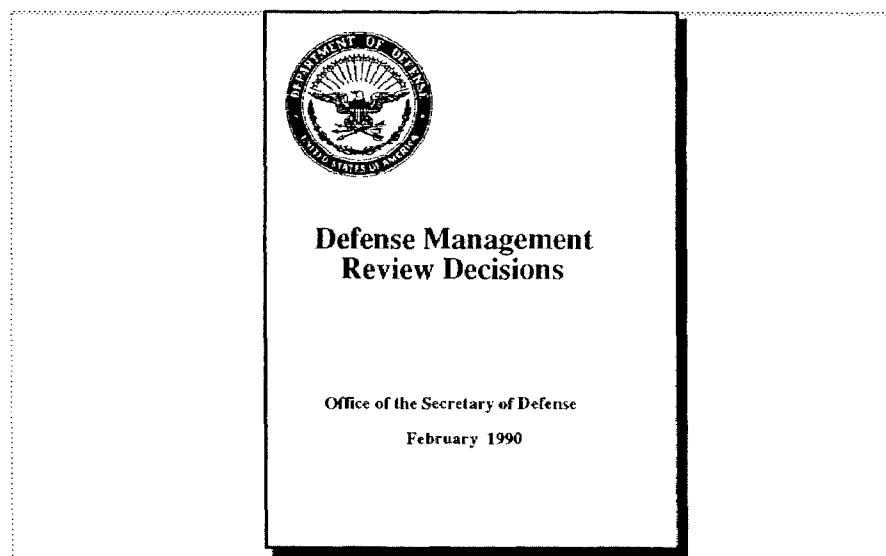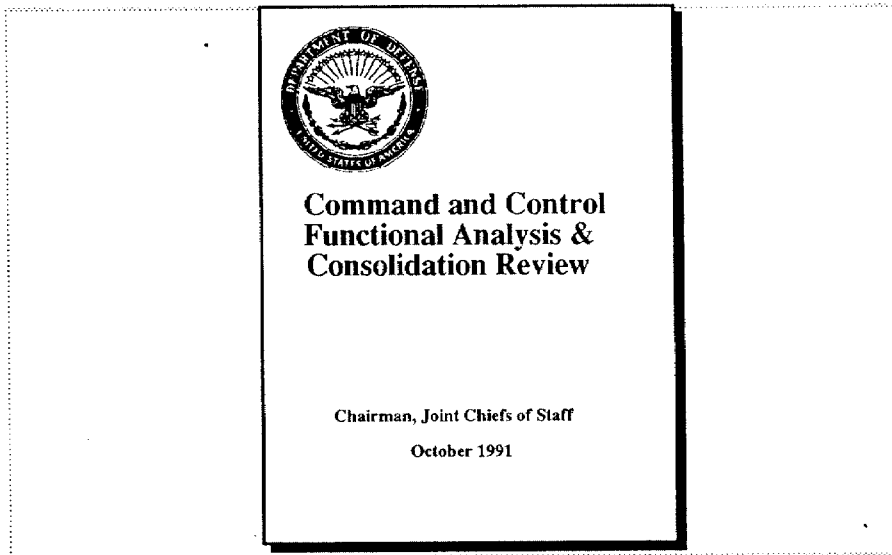## _CIM Approach: The Primacy of Policy over Politics_

```
        ┌─────────────────┐
        │     Policy      │  ❶
        └─────────────────┘
                 │
                 ▼
        ┌─────────────────┐
        │    Process      │  ②
        │  Improvement    │
        └─────────────────┘
                 │
                 ▼
        ┌─────────────────┐
        │   Information   │  ③
        │   Technology    │
        └─────────────────┘
```

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Slide 5

Defined Principles and Policies for Defense Management

**Defense Management
Review Decisions**

Office of the Secretary of Defense

February 1990

ASD(C4I), Director of Defense Information [11/15/92 - File T 642- 6]

Slide 6

Doctrine and Requirements for Command and Control Systems

Command and Control Functional Analysis & Consolidation Review

Chairman, Joint Chiefs of Staff

October 1991

ASDICAII, Director of Defense Information [11/15/92 - File T 442- 7]

Slide 7

From National Military Strategy Document, CM-1309-92, Section II

- The new strategy shifts its focus from containing communism and deterring Soviet aggression to a more flexible, regionally oriented strategy capable of countering a wide range of potential threats vital to US interests.

- For regional contingencies, conventional Command, Control, Communications, Computers and Intelligence (C4I) capabilities must support the rapid deployment of Joint and/or Combined forces.

- A C4I infrastructure must be globally available and capable of surging to accommodate contingencies. Resources should be interoperable and relocatable from one area to another.
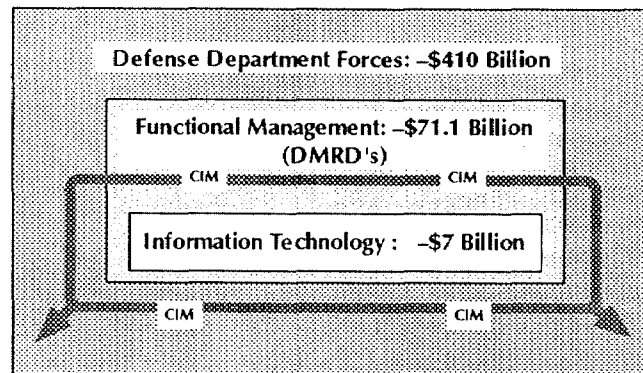
ASDIC4II, Director of Defense Information [11/15/92 - File T 442- 4]

Slide 8

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Long-Term CIM Objective: Small Forces Command & Control

• The needs of small, mobile, rapidly deployed and locally managed forces shall be the priority C4I requirement.

• The C4I capabilities of the small forces shall be the same as currently possessed by large commands.

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Slide 9

• Corporate Improvement Plan

Corporate Improvement Plan

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Slide 10

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The Context For Today's Discussion: Tasks for 1990-97

Defense Department Forces: –$410 Billion

Functional Management: –$71.1 Billion (DMRD's)

CIM   CIM

Information Technology : –$7 Billion

CIM   CIM

CIM = Corporate Information Management in the Department of Defense

Slide 11

Defense Functional Tasks for 1990-1997 ($ Billions)

Functional Category	Target Savings	%
Materials and Logistics	$46.7	66
General Administration	9.8	14
Automated Support and Systems	**6.9**	**9**
Finance, Procurement and Contracts	5.6	8
Base Operations, Facility Management	2.1	3
Total Savings ($ billions)	$71.1	100

Slide 12

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Estimated Contribution of CIM to Functional Programs

Other Improvement Programs

CIM Functional Programs

51%

49%

Total DMRD Cost Reductions = $71.1B

Additional CIM Cost Reduction Tasks Approved September 15, 1994-1999: +$12 Billion
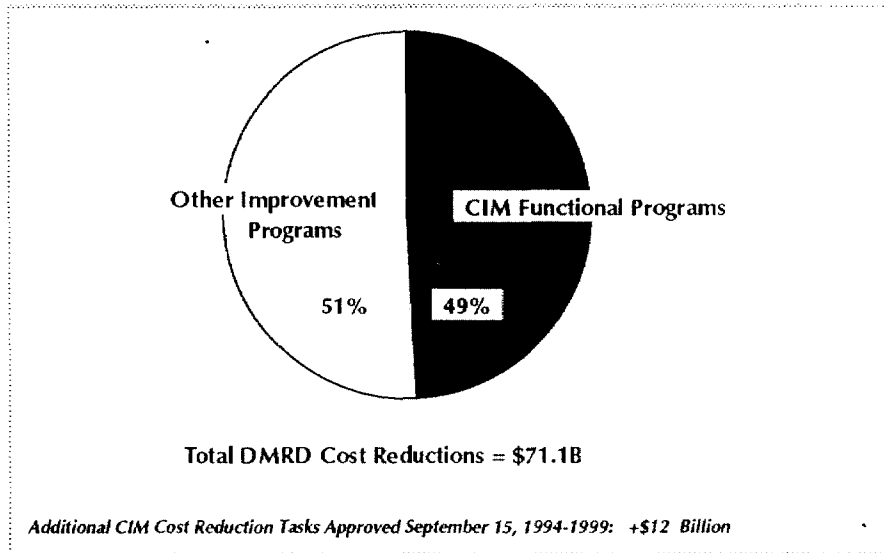
Slide 13

Defense Services' Cost Tasks for 1990-1997 ($ Billions)

Armed Service	Target Savings
Army	$21.0
Navy	21.5
Air Force	22.5
Defense Agencies	<u>6.1</u>
Total Savings ($ billions)	$71.1

Slide 14

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Savings of CIM Info Technology Initiatives to Date ($ Millions)

		Total FY 91/92	Proj. FY 91/97
Standard Systems Development	Plan	$861	$2,827
	Actual/Projected	$859	$3,446
	% Gain/Loss	-0.2%	+21.9%
ADP Facility Consolidation	Plan	($231)	$1,191
	Actual/Projected	($120)	$1,287
	% Gain/Loss	+48.0%	+8.1%
Long Haul Comm. Consolidation	Plan	$10	$304
	Actual/Projected	$6	$286
	% Gain/Loss	-40.0%	-5.9%
Total Savings	Plan	$640	$4,322
Total Savings	Actual/Projected	$745	$5,019
	% Gain/Loss	+16.5%	+16.1%

SOURCE: DMRD Update Report, April 1992

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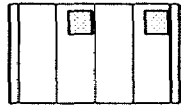
Slide 15

• _Cost Reduction_

Cost Reduction and Downsizing

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Slide 16

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Current Defense Information Infrastructure - Data Processing

1,000+ Data Processing Installations
- Average age over 11 years;
- Labor-intensive. Insufficient automation;
- Inadequate protection against deliberate attack;
- Do not share workloads and cannot act as back-up.

38 Major Central Design Organizations
- Excessive maintenance; long development cycles;
- Labor-intensive and non-standard development;
- Software maturity levels less than 1.

650,000+ Workstations and Terminals
- Growth chaotic and costly;
- A security exposure; lack of interoperability;
- Improvised applications, incompatible data-bases;
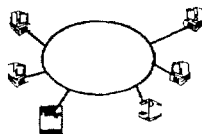- High training and support costs.

Slide 17

Current Defense Information Infrastructure - Communications

102 Long Distance Networks
- Constructed to support traffic for specific organizations or applications.
- Costly lack of interoperability.
- Labor intensive.
- Poor capacity utilization.

10,000+ Local Area Networks
- Supports local preferences only.
- Not interoperable.
- High support and maintenance costs.
- Major security exposures.

Slide 18

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Xerox Data Center Pricing Trends

	86	87	88	89	90	91	92
Volume Growth	–	+23%	+29%	+29%	+36%	+50%	+31%
Staff	268	255	254	242	232	236	232
Price Cut	–	-18%	-31%	-31%	-16%	-20%	-28%
1986 Relative Cost	$1.00	82¢	57¢	39¢	33¢	26¢	19¢

Compound Annual Productivity Growth: +25%

SOURCE: Director, Technology Services and Strategy, Xerox Corporation, 10/21/92

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Texas Instruments Five Year Consolidation Program

<u>Consolidation of 36 Data Centers into 4 Megacenters:</u>

• 50% reduction in price per work unit.

• Systems availability increased from 98.6% to 99.7%

• Transaction processing response time from 1.8 to 0.9 seconds

• On-time computer delivery increased from 97.6% to 99.1%

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Cost per Unit of Work for Small and Large Data Centers

Cost Category	Small DPI (<75 MIPS)	Large DPI (>160 MIPS)	% Advantage
Computer Hardware	42.6	37.5	+12%
Software	13.6	5.7	+58%
Operations Personnel	21.1	11.6	+45%
Disaster Recovery	2.3	0.7	+70%
Technical Support	19.2	8.8	+54%
Finance & Administration	6.3	3.6	+43%
Facilities	14.3	8.0	+44%
Total Cost Per Unit ($'s)	119.4	75.9	+36%

SOURCE: Consolidating Multiple Data Centers, I/S Analyzer, November 1990, Vol 28, No.11

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Slide 21

Data Center Rate* Reductions from DITSO "Utility"

	FY 92 Rates	FY 94 Rates	% Reduction
IBM CPU Hour	210.47	144.60	-31.3%
Input/Output	0.209	0.111	-44.7%
Tape Mounts	4.0247	2.5361	-37.0%
Disk Storage	0.00146	0.00122	-16.7%
Tape Storage	0.1482	0.0611	-58.8%
Printed Page	0.0402	0.0286	-28.9%
Microfiche	0.3565	0.338	-4.9%
Cards Punched	0.0414	0.0509	+23.0%
Support Services	38.46	26.91	-30.0%

Estimated weighted average productivity gains: 18%

* $ per unit of output. Depreciation included in all rates.

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Slide 22

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Benchmarking IPC Personnel Costs by Operating Function

IPC Function	DoD Sample	Industry Average*	Industry Best*	Potential Average Savings/yr	Potential Best Savings/yr
Print & Distribution	0.368	0.174	0.03	$121,159	$211,878
Tape Operations	0.286	0.237	0.077	$30,716	$130,893
Console Operations	0.245	0.128	0.058	$73,378	$117,268
Administration	0.18	0.09	0.022	$56,313	$98,549
Customer Service	0.169	0.071	0.018	$61,433	$94,709
Schedulers	0.125	0.046	0.016	$49,488	$68,731
13 Other Functions				$124,572	$400,850
Total Savings ($000)				$517,059	$1,122,878
% Labor Savings Potential				30.2%	65.5%
Required Annual Productivity Gains (1993-1999)				+14%	+21%

*SOURCE: Peat, Marwick & Mitchell Consulting study, Summer 1992 [Personnel employed per MIPS]. Est. personnel costs: $1.8 B

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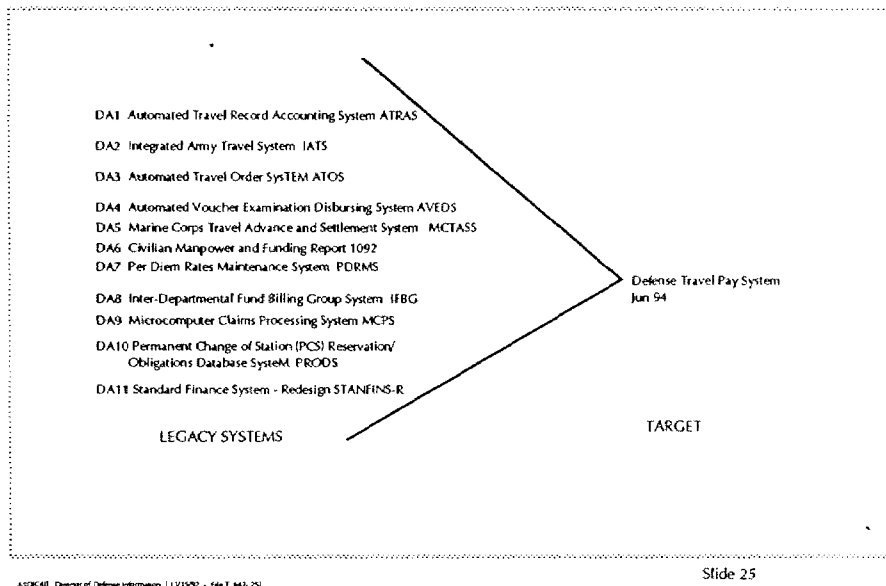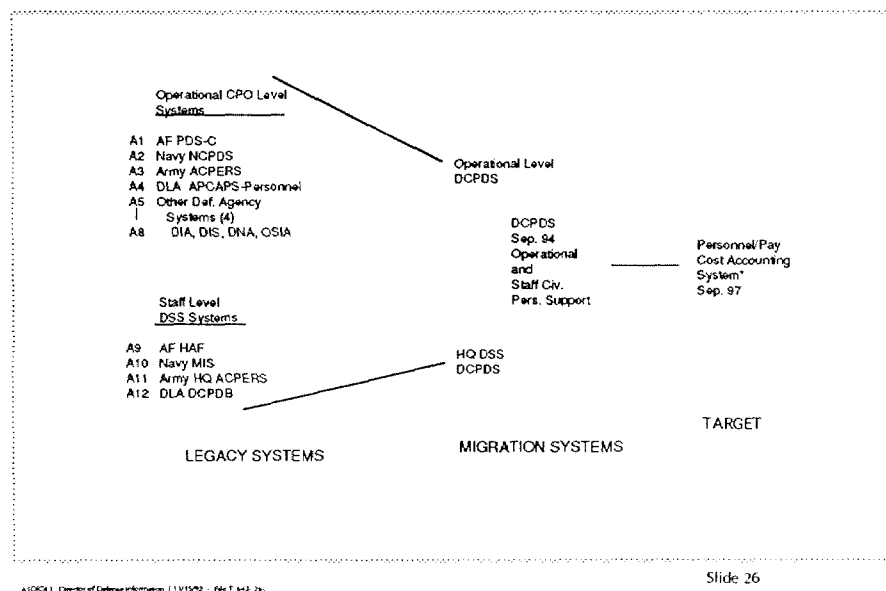
Financial Function - Systems Summary
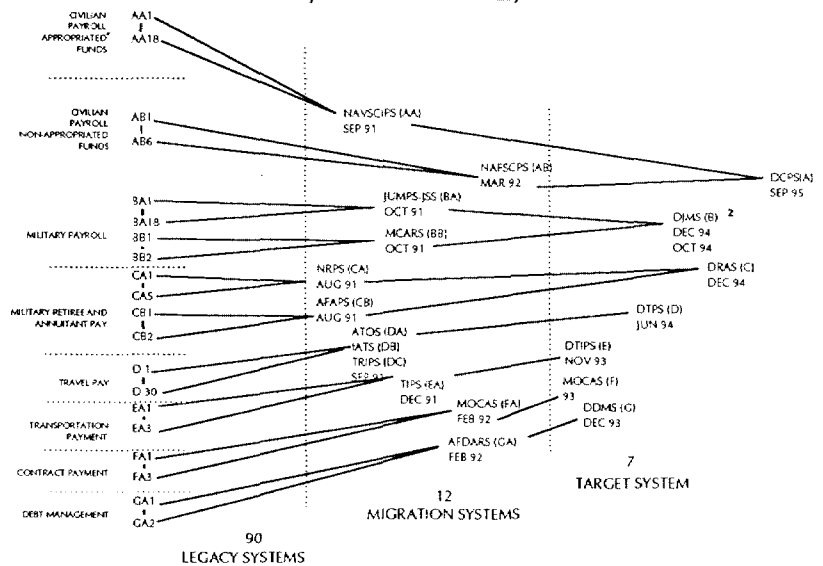
Corporate Information Management:
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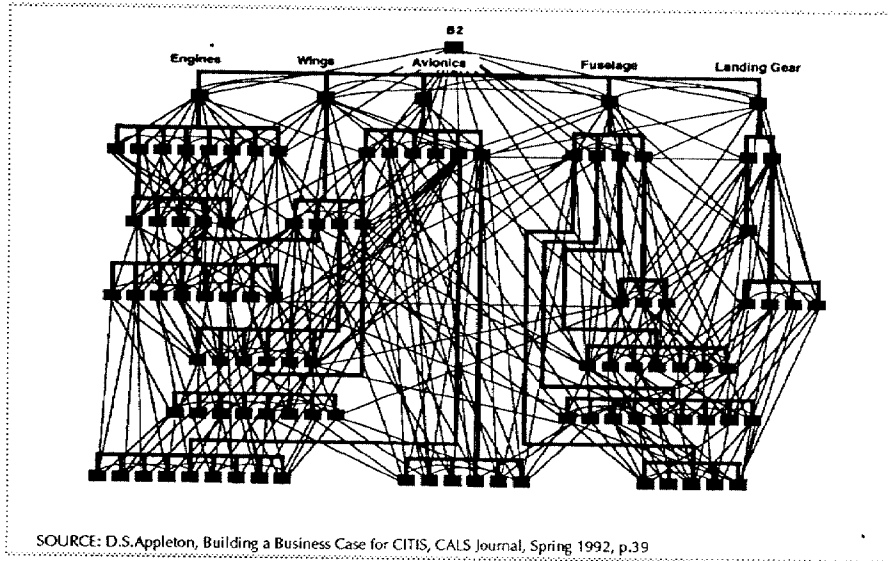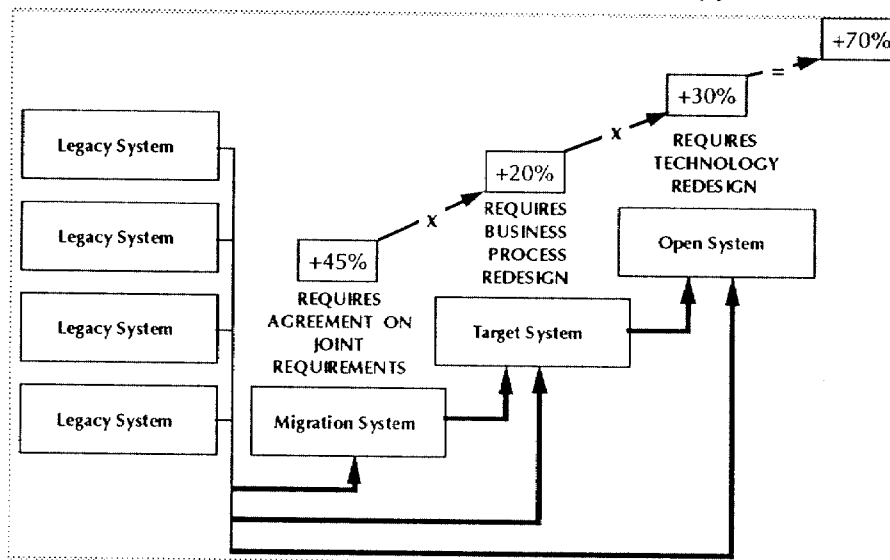### San Diego, CA. - December 3,1992

Travel Pay Systems

DA1 Automated Travel Record Accounting System ATRAS

DA2 Integrated Army Travel System IATS

DA3 Automated Travel Order SysTEM ATOS

DA4 Automated Voucher Examination Disbursing System AVEDS
DA5 Marine Corps Travel Advance and Settlement System MCTASS
DA6 Civilian Manpower and Funding Report 1092
DA7 Per Diem Rates Maintenance System PDRMS

DA8 Inter-Departmental Fund Billing Group System IFBG
DA9 Microcomputer Claims Processing System MCPS

DA10 Permanent Change of Station (PCS) Reservation/
　　　Obligations Database SysteM PRODS

DA11 Standard Finance System - Redesign STANFINS-R

Defense Travel Pay System
Jun 94

LEGACY SYSTEMS

TARGET

Civilian Personnel Resources Systems

Operational CPO Level
Systems

A1 AF PDS-C
A2 Navy NCPDS
A3 Army ACPERS
A4 DLA APCAPS-Personnel
A5 Other Def. Agency
I 　　Systems (4)
A8 　　DIA, DIS, DNA, OSIA

Staff Level
DSS Systems

A9 AF HAF
A10 Navy MIS
A11 Army HQ ACPERS
A12 DLA DCPDB

Operational Level
DCPDS

DCPDS
Sep. 94
Operational
and
Staff Civ.
Pers. Support

HQ DSS
DCPDS

Personnel/Pay
Cost Accounting
System*
Sep. 97

TARGET

LEGACY SYSTEMS

MIGRATION SYSTEMS

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Information Processing Without Integrated Data Bases

SOURCE: D.S.Appleton, Building a Business Case for CITIS, CALS Journal, Spring 1992, p.39

ASD(C4I), Director of Defense Information [11/15/92 - F4e F 642-27]   Slide 27

1993-1999 Productivity Gain Estimates for CIM Applications

ASD(C4I), Director of Defense Information [11/15/92 - F4e F 642-24]   Slide 28

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Forming the Defense Information Infrastructure

- Appoints a single manager for technical control and configuration management;
- Establishes a single manager for centralized acquisition and education;
- Assures interoperability, standards enforcement, and security;
- Provides large investments for modernization, security and base level infrastructure;
- Assigns infrastructure above tactical level to DISA while Components retain about 65% of personnel;
- Allows local commanders to own/lease/operate base level computing systems under central technical control;
- Reduces cost s by 25%. Initial estimates are $12B savings 1994-1999 with savings of over $4B annually thereafter;
- Frees resources for warfighting.

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Concept of Operations for the Defense Information Infrastructure

- Controls networks and computer processing all the way to the individual keyboard.

- Assures interoperability, standards enforcement, security survivability. Deals with vulnerability to terrorist attack.

- Creates a $5 billion+ computer services enterprise.

- Technology assets on base owned by DISA and leased to local command for local control and operation.

- Applications to move from mainframes to distributed low-cost computers. Mainframes housed in about 25 megacenters for network and archival control.

- Outsourcing for "reconstitution" capacity.

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Defense Information Technology Services Organization in Place

Data Processing Installations:

Location	# Personnel	#Mainframes	#Terminals	M$/Year
Cleveland	251	4	3,751	$18
Columbus	329	5	5,728	$23
Denver	230	6	2,886	$24
Indianapolis	261	7	13,375	$26
Totals	1,071	22	25,740	$93

Central Design Activities:

Locations	#Personnel	Principal Applications	M$/Year
5	1,424	50	$113

Slide 31

• Information Resource Policies

Information Resources Policies

Slide 32

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Summary of DoDD 8000.1 Policy : Defense Information System

Establishes policy and assigns responsibilities for the design, implementation, operation and oversight of Defense Information System.

• Shift of control to OSD Functions from Components' IRM's.

• Joint interoperable standard systems – with local options.

• Shift of fiscal controls to customer: fee-for-service where possible.

• Data a corporate asset, 100.0% controlled.

• Security and survivability controls centralized.

• Systems integration across Functions and Services mandatory.

• Business process improvement ahead of technology solutions.

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Slide 33

DoD Information Management Doctrine - Management

• Derive information management strategies directly from war plans

• Establish technical systems integration capabilities as a core Defense capability

• Replace current over-emphasis on technology acquisition by planning for total functional life-cycle costs

• Apply business re-engineering as a continuous, incremental and evolutionary productivity-enhancement process

• Charge the functional customer for information technology based on activity-based costing

• Benchmark transaction costs against commercial services

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Slide 34

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DoD Information Management Doctrine - Design

- Pursue evolutionary and incremental systems deployment
- Design by prototype within a generally defined strategy
- Train as you fight and design (prototype) as you train
- Give commanders capacity for complex inquiries
- Allow for rapid re-configuration of support services
- Have business process redesign precede systems design
- Construct variety from software elements and not hardware

ASD(C3I), Director of Defense Information [11/15/92 - File T 642 35]

Slide 35

DoD Information Management Doctrine - Network

- Treat communication networks designs as inseparable from computer systems
- View the computer network as an extended workstation
- Recognize the inherent vulnerability of all networks in war and therefore place computing capacity at point of use
- Integrate data, voice, graphics and video into a shared network
- Establish central management of all communication networks
- Provide, as a central service, value-added communications functions such as directory, security, information interchange and software distribution services

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Slide 36

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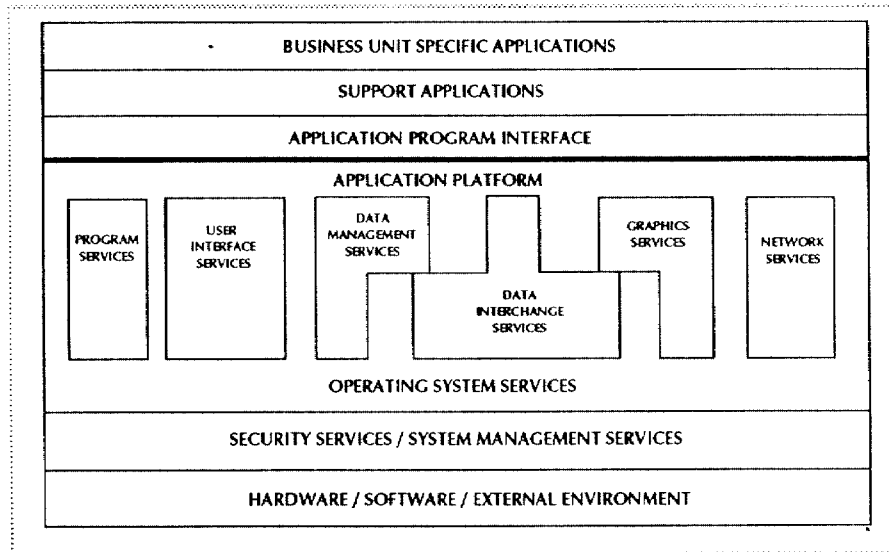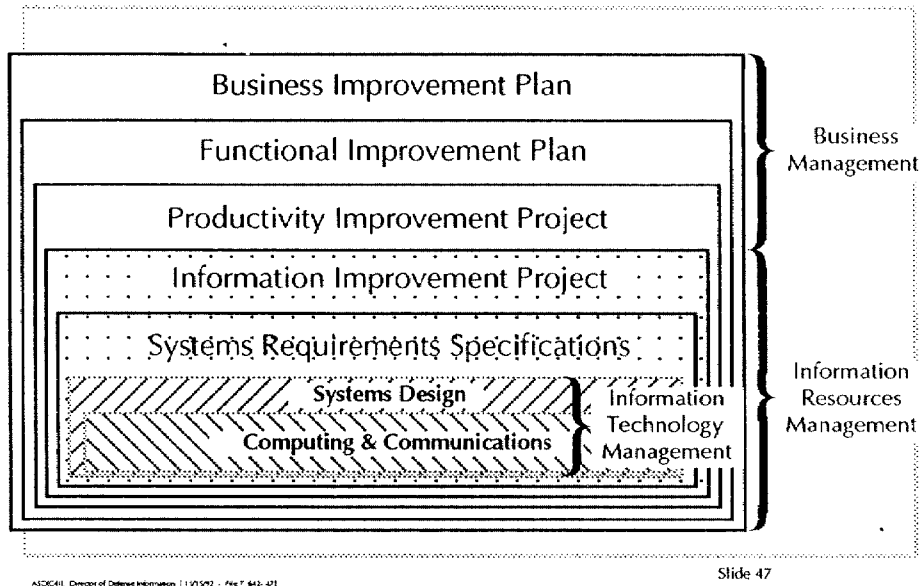
Schema for Distribution of DoD Computing Resources

Gra~~phic Info Window, Personal Tools, Inquiry Languages,~~ **Report and Inquiry Servers** ~~Customized Applications, Prototyping Tools, Private~~ Applications and Files	**PERSONAL LEVEL** Personal Workstations
Applications Development & Maintenance **Application Servers**	**APPLICATION LEVEL** Distributed Client Servers
Functions ... **Functional Data Servers** ... Functions	**FUNCTION LEVEL** DoD Mega Data Centers
Intelligence Command and Control Support Network, Configuration and Access Controls	**MISSION LEVEL** DoD Network Control Centers
Repositories of Metadata and Software Objects	**ENTERPRISE LEVEL** DoD Master Archive Center

Slide 37

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DoD Information Management Doctrine - Security

- Expect that information systems are choice war targets
- Validate each systems design for war-scenario survivability
- Achieve survivability primarily through redundancy
- Support critical data bases from low-risk sites
- Subject network to hostile tests to identify exposures
- Control access to network entry points, especially for software management and maintenance
- Design security into hardware configuration
- Maintain central monitoring over mission-critical terminals

Slide 38

ASD(C3I), Director of Defense Information (11/15/92 - file T 642- 38)

DoD Information Management Doctrine - Data

- Mandate single-point entry of data
- Require DoD certification of all data definitions
- Assure single source data origination stewardship
- Issue data definitions as Government Furnished Material
- Dictate the maintenance of data models for all applications
- Centralize database backup and archive functions
- Pursue electronic data interchange agreements with other agencies, suppliers and contractors

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Slide 39

Growth in Data Standardization

- 38,000 data elements submitted for de-conflicting and standardization.
- Found over 150 aliases in one instance
- Data administration programs now for every DoD function

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Slide 40

• *Information Architecture*

Information Architecture

Consequence of Current Acquisition Approach

• Missing: Cross-functional or cross-services integration of applications

• Missing: Cross-functional or cross-services integration of data

• Missing: Cross-functional or cross-services integration of communications

• Inter-operability difficult and costly

• Integration seeking only partial solutions

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An Evolutionary and Rapid Response Acquisition Process
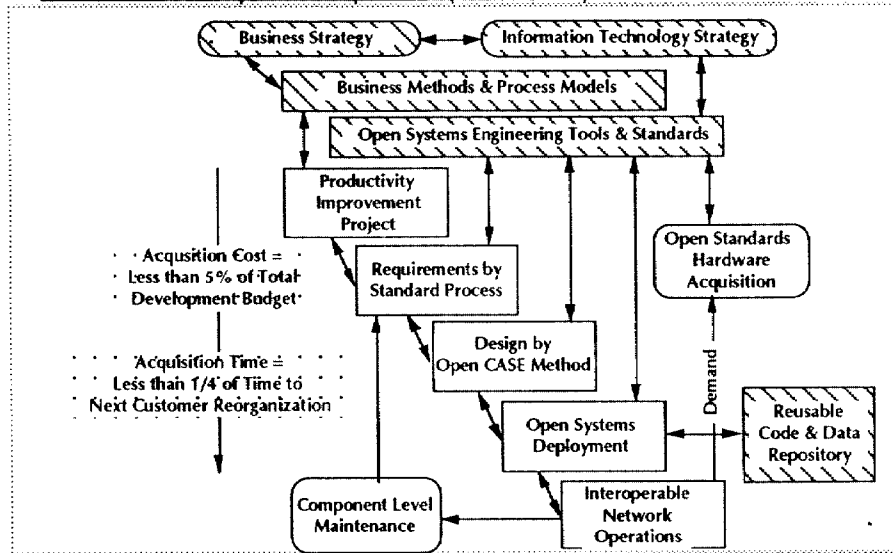
Slide 43

The DoD Budget Process

Slide 44

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The CIM Reference Model for Computing

| BUSINESS UNIT SPECIFIC APPLICATIONS |
| SUPPORT APPLICATIONS |
| APPLICATION PROGRAM INTERFACE |

APPLICATION PLATFORM

PROGRAM SERVICES | USER INTERFACE SERVICES | DATA MANAGEMENT SERVICES | DATA INTERCHANGE SERVICES | GRAPHICS SERVICES | NETWORK SERVICES

OPERATING SYSTEM SERVICES

SECURITY SERVICES / SYSTEM MANAGEMENT SERVICES

HARDWARE / SOFTWARE / EXTERNAL ENVIRONMENT

ASD(C4I), Director of Defense Information [11/15/92 - File T 642- 45]

Slide 45

CIM Approach: The Precedence of Process over Technology

Policy ①

↓

Process Improvement ❷

↓

Information Technology ③
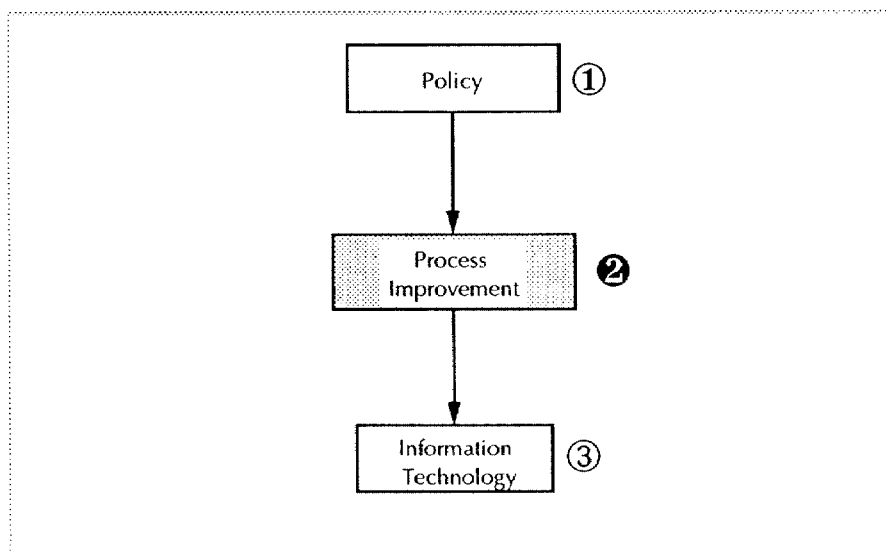
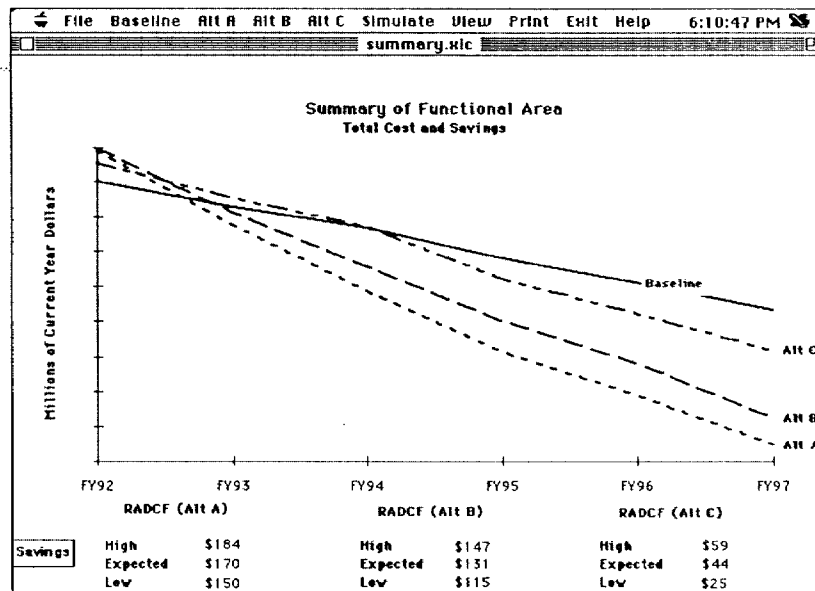ASD(C4I), Director of Defense Information [11/15/92 - File T 642- 46]

Slide 46

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Functional Management and Information Technology

Business Improvement Plan	
Functional Improvement Plan	Business Management
Productivity Improvement Project	
Information Improvement Project	
Systems Requirements Specifications	Information Resources Management
Systems Design — Information Technology Management	
Computing & Communications	

Slide 47

The CIM Business Re-engineering Process Model

- Step #1: Business Process Modeling "As-Is"
- Step #2: Business Process Modeling "To-Be"
- Step #3: Value-Added Analysis
- Step #4: Functional Economic Analysis

Slide 48

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Business Process Improvement Program

- Over 70 Business Process Improvement projects
- Example follows:
  -Undertaken by Army Directorate of Engineering & Housing.
  -Applied CIM Business Improvement Methodology
  -Designed to Streamline Engineering & Housing Maintenance.
  - Contributed to $300 Million Savings, already reflected in budget.
  - Conducted at Fort Sill, OK 6 January - 15 April 1992.

ASD(C4I) Director of Defense Information [11/15/92 - File T 642-49]   Slide 49

Cost Profile of Fort Sill Directorate of Engineering & Housing

Contracts, Materials, Utilities, etc.	$41.2M
Craftsmen Activities	$ 7.8M
* Non-Craftsmen Activities	$12.4M
Total Incurred Costs	$61.4M

|	
Primary Activities	$ 9.4M
Secondary Activities	$ 3.0M
* Non-Craftsmen Activities	$12.4M

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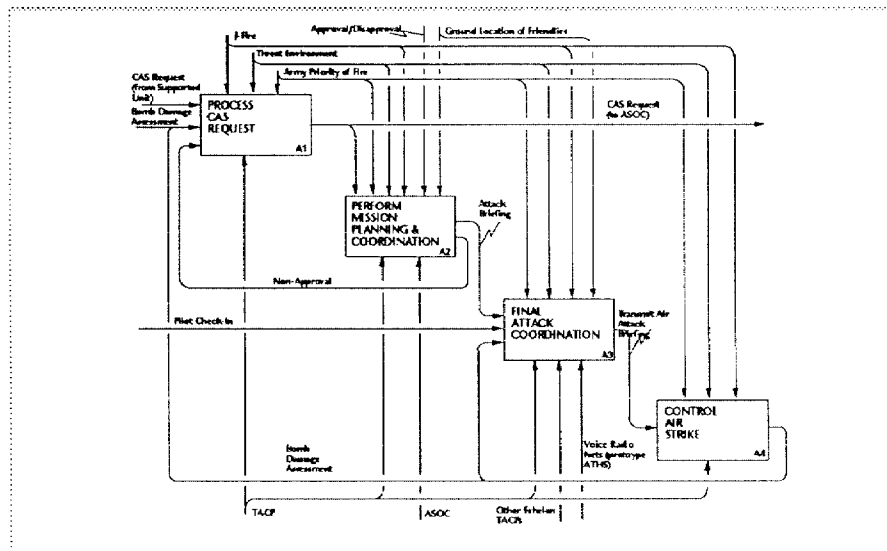### San Diego, CA. - December 3, 1992

Level 4 Business Process Model - Develop Detail Estimate
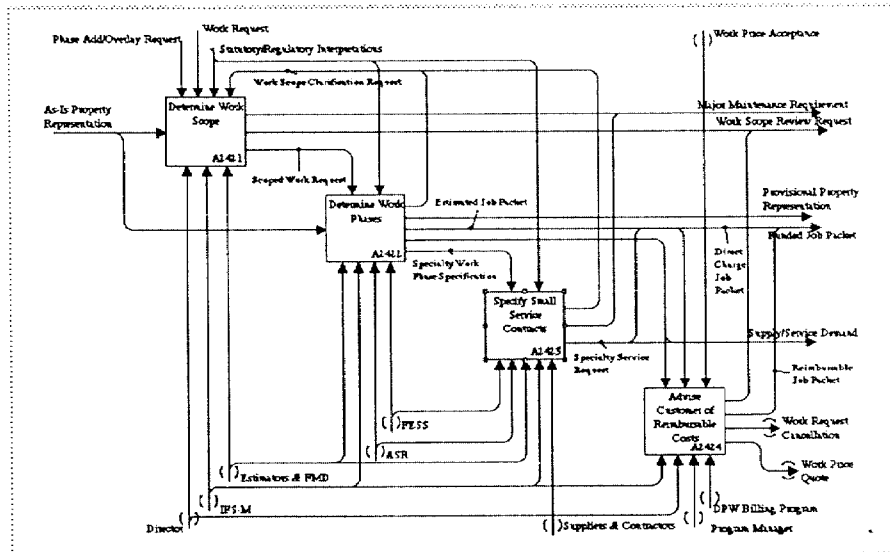
Slide 51

Fort Sill 1991 Business Process Unit Costs

Business Process	Volume	Unit Cost
Prepare a Service Order	51,000	$2.40/order
Approve/Disapprove Work Order Request	4,100	$58 /request
Develop Work Order Estimate	860	$336 /estimate
Support In-house Work Order Activities	2,400	$197 /order
Specify Supply/Service Request	31,000	$11.50/request
Receive Depot/Purchase Delivery	66,000	$14.10/receipt
Issue Supply Item	167,000	$7.30/issue
Issue Work Order Supply Items/order	15 items	$109 /order
Process In-house Work Order	1,900	$364 /order
Process In-house Work Order with Estimate	500	$700 /order
Process Contracted Job Order	240	$788 /order
Provide Construction Order Engineering	250	$7490 /order
Provide Construction Order Contracting	120	$2860 /contract

Slide 52

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Functional Economic Analysis

- Quantifies costs and benefits using Discounted Cash Flow analysis.

- Accounts for risks.

- Applies to decisions involving existing and proposed:

  - Business methods & Information technology

- Focuses on Operations/Management ratio as the measure of "overhead cost" efficiency (the DoD Tooth/Tail ratio).

Slide 55

Slide 56

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Air Force Close Air Support Process Model - Top View
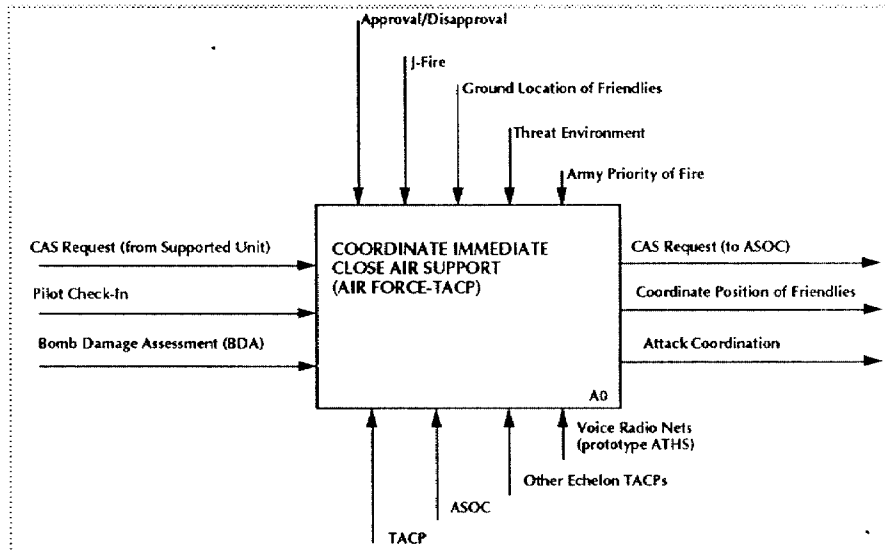
Slide 57

Air Force Close Air Support Process Model - Second Level View

Slide 58

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A Method for Organizing Information Resources
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### *Non-Value Added Activity Analysis*

Activity/Process	Reference	Module	Actual Cost	Unit Cost
*Validate Property Reqmnts	A2415	A	$128,890.44	$16.74
Submit Requirements	A2411	A	$79,868.17	$10.37
Determine Special Interests	A2412	A	$42,813.33	$5.56
Prioritize Requirements	A2414	A	$10,439.42	$1.36
*Classify Accounts	A2416	A	$659.18	$0.09
Total Cost			$262,670.55	$34.11
Total Non-Value Added Cost Content			$129,549.62	$16.83
Total Potential Cost			$133,120.93	$17.28

* Activities classified as not adding Value-added

Note: Estimated Production Qty: 7,700

Slide 53

1991 Candidates for Examination as Non-Value Added Activities

Activity Description	Refer #
Status Work Progress	A2455
Monitor Contract Performance	A123322
Validate Property Maintenance & Repair Requirements	A2415
Write Contract Modifications	A123323
Fund Supplies and Services Demand	A122
Inspect Cleanliness of Quarters	A331
Dispose of Reusable Items	A1265
Expedite Delivery	A1235
Mitigate Hazardous Material Spills	A442
Prepare for Mobilization & Disasters	A46
Approve Worth of Constr Projects	A213
Provide Relocation Assistance	A326
Request TRADOC Demolition Approval	A252
Track Local Property Rentals	A322
Stage Work Materials	A2442
Perform Thermographic Surveys	A341
Close Work/Service Orders	A2456
Identify Non-Utilized Buildings	A251
Coordinate Post-Award Meetings	A123321
Classify Accounts for MR	A2416
Determine Need For Detailed Estimates	A2413
Expedite Work Material	A2443
Release Work Material	A2444
Inspect for Completion/Beneficial Occupancy	A235
Conserve Historic Buildings	A4313

Slide 54

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Portion of Data Model of Close Air Support
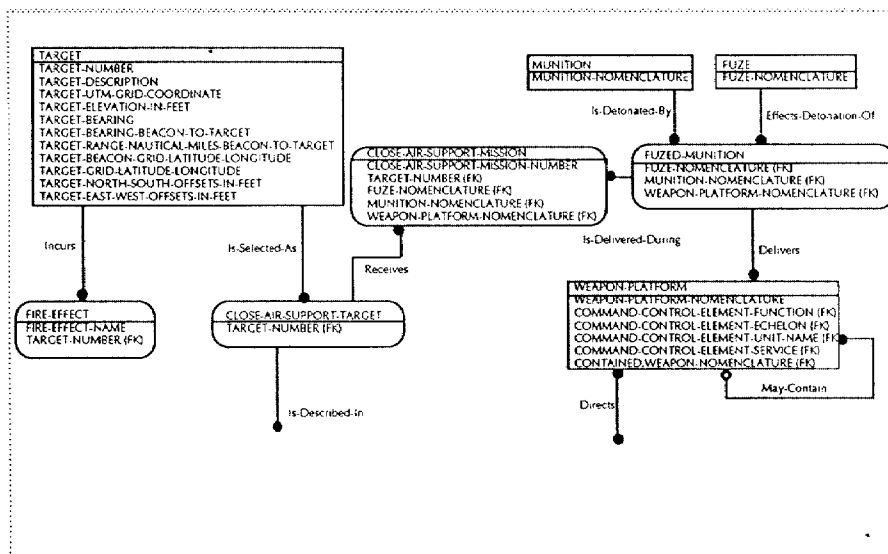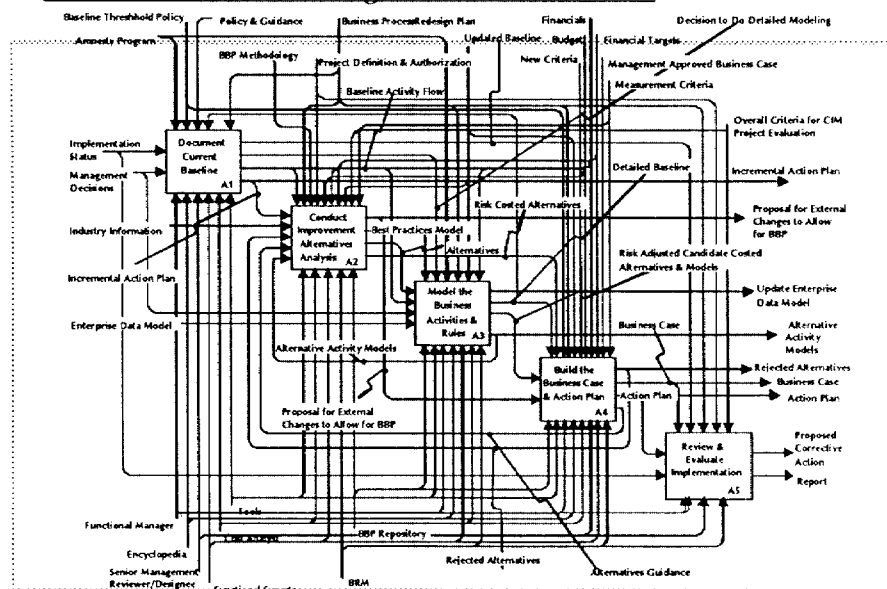
Approval of an Engineering Change Order
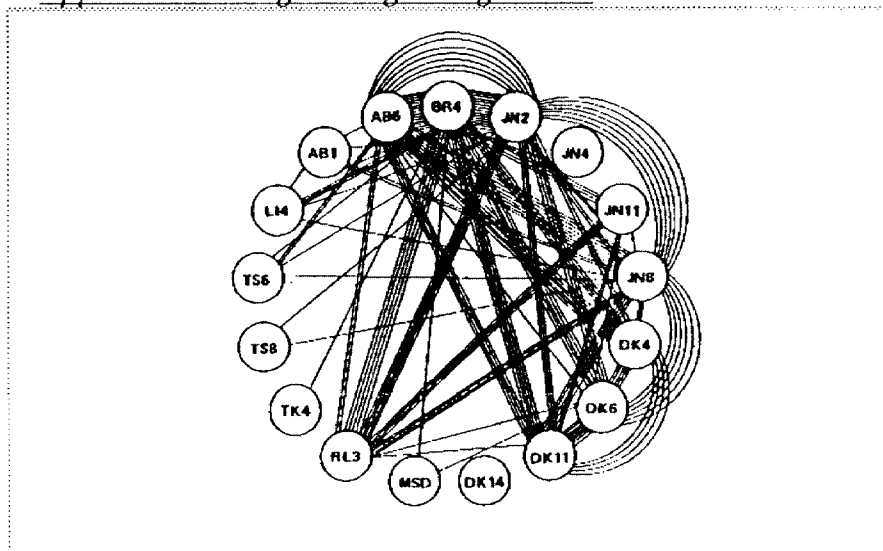
Business Process Redesign - Level 0 Activities
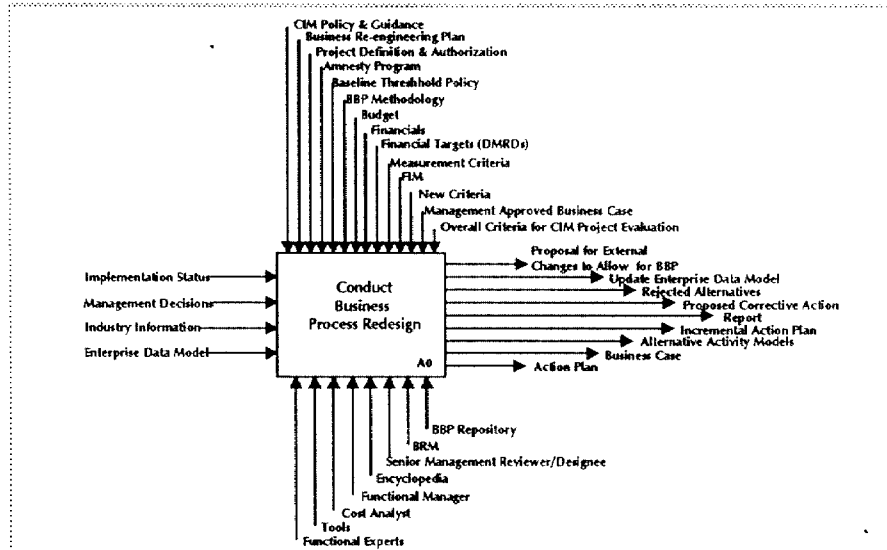
Slide 61

Business Process Redesign - Level 1 Activities

Slide 62

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• *Information Technology*

Information Technology

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Slide 63

Technical Requirements for Deployable CIM Systems

• Standard, vendor-independent, scalable, real time, reliable, inter-operable, flexible, secure, survivable, portable, redundant, damage-resistant, low-cost, long-life, commercial, plug-together elements.

• Easy to test, use, train, game and simulate.

• Minimum DoD staff for design, deployment, operation and maintenance.

• An inter-operable information architecture.

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Slide 64

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A Method for Organizing Information Resources
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Levels of DoD Systems Integration
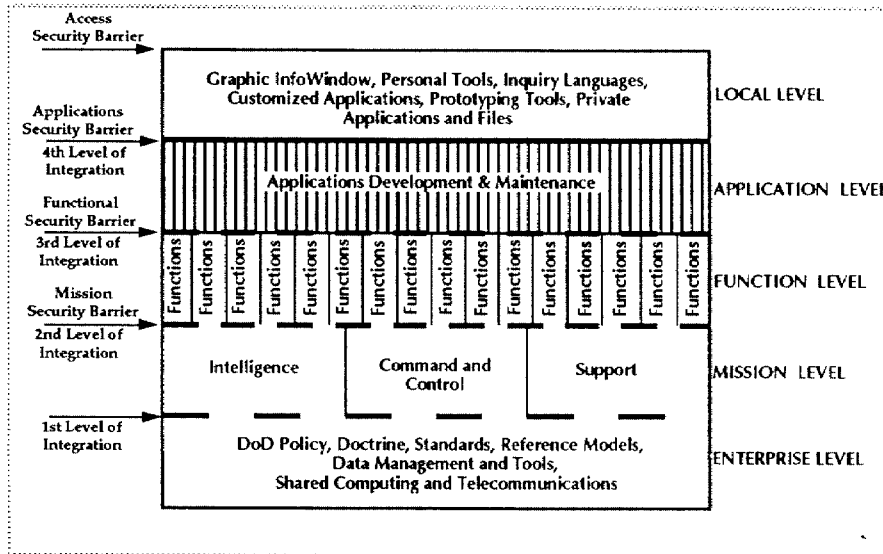
Importance of Reports in Two Representative Applications

	Manufacturing	Finance
Total lines of code	3+ million	1+ million
Reports as % of lines of code	70%	80%
% of report lines of code changed during maintenance	90%	90%
% of reports that could be done with end-user tool	60%	60%+

SOURCE: Gartner Group, 1989

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DoD Information Management Doctrine - Technology

- Use off-the-shelf hardware and software
- Lengthen technology life by continuous upgrading
- Distribute hardware and software from re-use "warehouses"
- Require single workstation for individual information needs
- Establish standardization of display interface style
- Commit to vendor-independent inter-operable systems
- Pursue a distributed client/server architecture
- Provide scalable computing capacity using microprocessors

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Slide 67

DoD Information Management Doctrine - Standards

- Design systems according to the DoD Reference Models
- Follow industry standards, FIPS standards if industry standards not available and MIL standards only if necessary
- Define, store and distribute software objects
- Adopt a software development toolset
- Define a process and data modeling
- Specify a method for evaluation and testing of systems
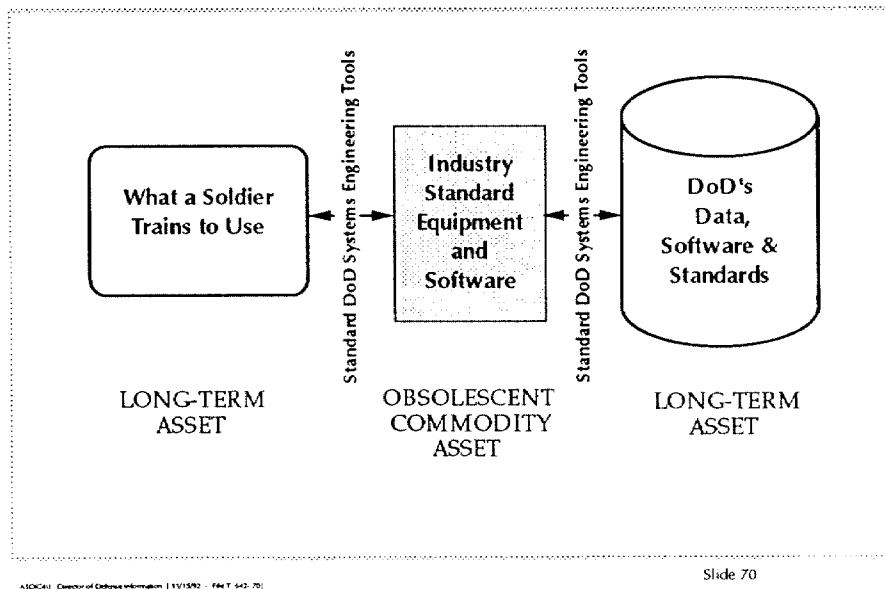
ASD(C3I), Director of Defense Information [11/15/92 - File T 642- 68]

Slide 68

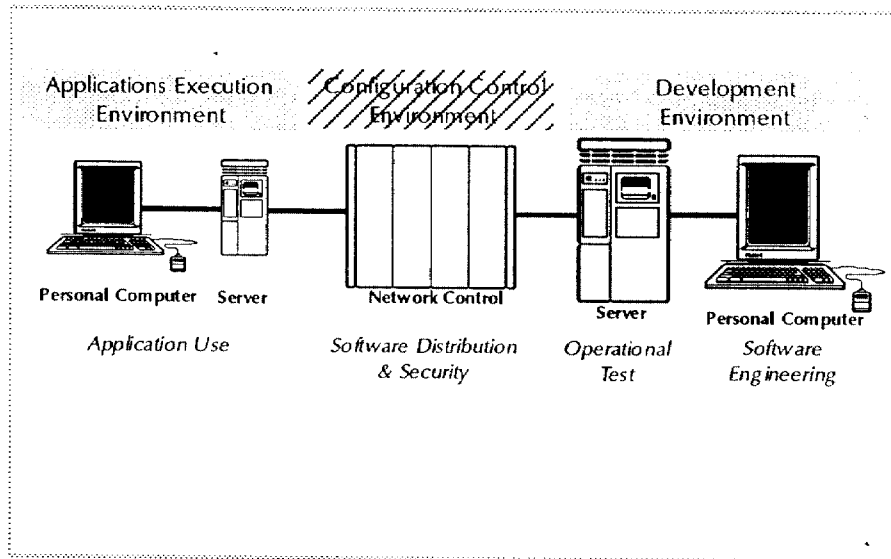## Estimate of DoD Achievable Software Costs

Slide 69
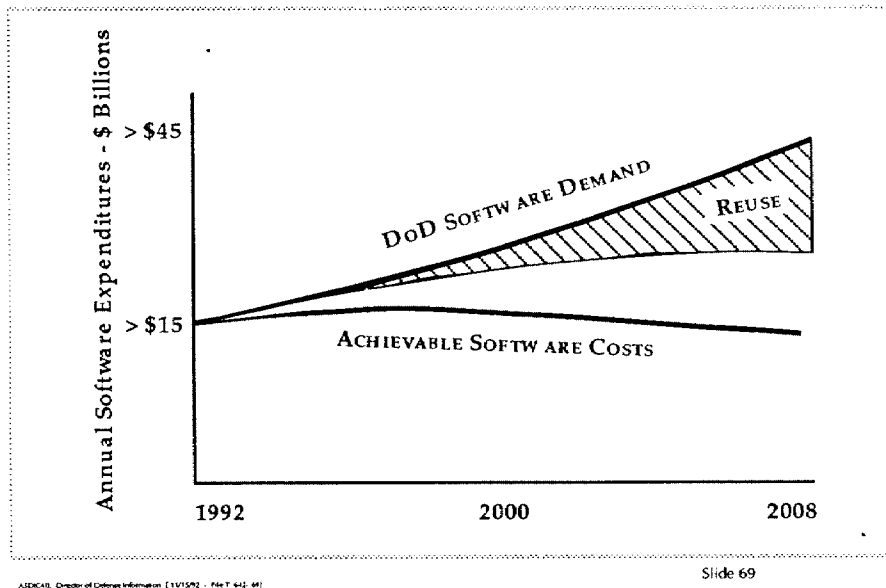
Acquiring Standard DoD Systems Engineering Tools

Slide 70

Corporate Information Management:
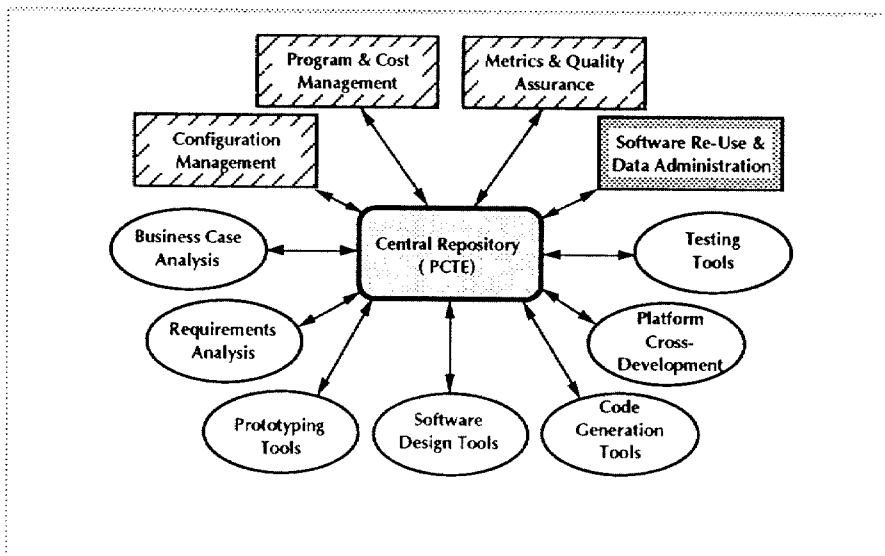A Method for Organizing Information Resources
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Integrated Computer-Aided Systems Engineering Environments

I-CASE Tools and Repository

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Growth in Central Software Repository
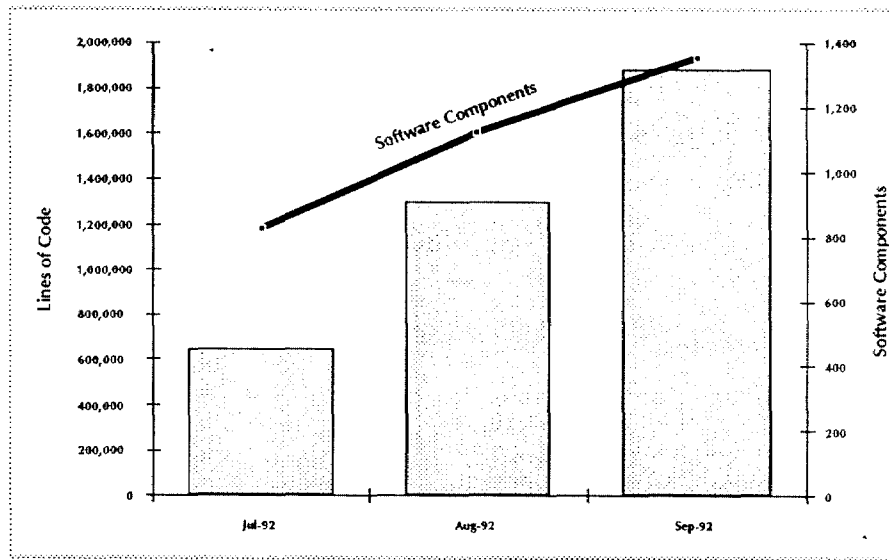
Slide 73

ASDIC4B, Director of Defense Information (11/15/92 - File T #42- 73)

Ada Software Component Reuse at Gunter AFB

Application	Lines of Code	# of Reusable Components	% of Code Reused
Inventory Control - LOGMARS II	18,673	10	64%
Inventory Control - LABELS *	8,846	7	73%
Stock Fund - MAJCOM	20,529	10	65%
Repairable Support	15,355	10	66%

NOTE: Written by three programmers in three days, or 983 lines of code/programmer/day. Estimated productivity gain over 1,000%.

SOURCE: Memorandum from Lloyd Mosemann, 19 June 92, report by Capt. Brown/LGSXD

Slide 74

ASDIC4B, Director of Defense Information (11/15/92 - File T #42- 74)

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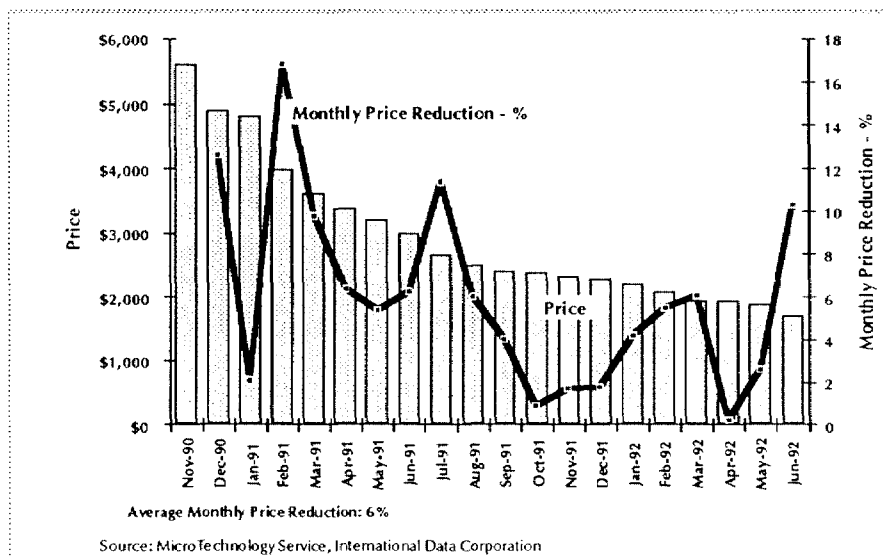San Diego, CA. - December 3,1992

Some Software Reuse Principles

- Reuse is an integral element of Software Engineering
- Domain Analysis and Domain Models are the focus
- Will buy or license reusable components from industry
- Will certify and maintain reusable components
- Zero defects are the objective for reusable components
- Integrate reuse into systems life-cycle by means of I-CASE
- Operated by the Defense Software Repository Systems Net
- Managed by the Software Reuse Operations unit of DISA
- Define metrics to evaluate reuse success
- Provide near-terms services: Training, Acquisition, Recovery

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Slide 75

Prices and Price Changes of 486/33 Microcomputers

Average Monthly Price Reduction: 6%

Source: MicroTechnology Service, International Data Corporation

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Slide 76

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Information Technology Re-use Organization

- Purchase only as needed, on short-term contracts
- Maintain existing inventory in DoD depots
- Reduce security risks from on-site maintenance
- Unbundle hardware from software
- Upgrade software through DoD network
- Provide protection against software intrusion
- Offer short term "leases" based on fee for service
- Maintain control of DoD microcomputer assets

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Slide 77

Information Technology Acquisition Bulletin Board System

- Bids requested on 14 microcomputer configurations;
- Streamlined acquisition process -Inquiry-Quote-Order (IQO);
- Bids of standard configurations on public bulletin board;
- Awards electronically transmitted;
- Vendors working on integration of IQO into own order entry system;
- "I do not see any reason to do business with the federal government any other way. It will save the government money overall, and it should also reduce the vendors' cost of doing business." [A vendor comment];
- Bulletin Board first step in transformation of the Defense Communications Office to EDI acquisition of technologies.

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Slide 78

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What is CIM?

- CIM is a pervasive "Enterprise" integration process.

- CIM is a response to changes in strategy and resources.

- CIM links the "business" of DoD with Information Resources management.

- CIM restores the initial intent of the "Information Resources Management" initiative.

- CIM accelerates the introduction and use of information technologies.

- CIM couples information resources to the evolving missions and new organization of DoD.

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Slide 79

Summary

- CIM is largest information technology program ever.

- CIM is subordinate to DoD policy, in a rapidly changing environment.

- CIM commitment to enhance information warfare capabilities: centrally managed infrastructure, decentralized operations.

- Key to CIM: schedule, schedule, schedule. $ will come.

- CIM strategy: sink deep foundations, go for structural change, not cost reduction

- Latest technology is best and least expensive

- Not doing as good as we should, doing better than expected

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Slide 80